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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/663,315	09/15/2000	Christoph Hermann	PHD 99-175	2350

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P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
NG, CHRISTINE Y	
ART UNIT	**PAPER NUMBER**
2663	9

DATE MAILED: 12/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/663,315	HERMANN, CHRISTOPH	
	Examiner	Art Unit	
	Christine Ng	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 9-11* is/are rejected.

7)☒ Claim(s) *8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 September 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4 & 8*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "the second persistency probability" in lines 3 and 5 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 4-7, 10 and 11 are rejected under 35 U.S.C. 102(e) as being unpatentable over U.S. Patent No. 6,374,099 to Bi et al.

Referring to claims 1, 10 and 11, Bi et al disclose in Figure 1 a wireless network comprising at least a base station (Elements 14a-e) and a plurality of assigned terminals (Elements 12a-c) for exchanging user and control data according to claim 1; a base station (Element 14c) in a wireless network having a plurality of assigned terminals

(Elements 12b and 12c) for exchanging user and control data according to claim 10; and a terminal (Element 12b) in a wireless network comprising at least one base station (Element 14c) and further assigned terminals (Element 12c) for exchanging user and control data according to claim 11. Refer to Column 1, lines 22-23 and Column 2, lines 42-48. Bi et al disclose in Figure 4 that the terminals are each provided for transmitting to the assigned base station a reservation message (access probe) that depends on a first persistency probability (predetermined threshold P) for assigning transmission capacity for at least one data packet. Additionally, further transmission of a reservation request (Blocks 70-72) received at least once by the base station depends on at least a further persistency probability (another predetermined threshold P). Terminals transmit on access channels according to a random access protocol in which the terminals try to gain access to the wireless network by sending access channel requests, or access probes. Before sending the access probes on the access channel, the wireless station must be able to pass a persistence test (Block 68) on an access channel slot. The wireless unit can transmit an access probe only if a generated random number RP is less than a predetermined threshold P (Block 72). If RP is greater than P, the wireless unit waits at least until the next time slot to perform the persistence test again (Block 70). Refer to Column 2, lines 54-63, Column 3, lines 9-11 and Column 4, lines 8-30. Also, the P values can be "re-calculated at each pass through the persistent test to ensure that updated persistence parameters are used to calculate the P values" (Column 8, lines 8-10).

Referring to claim 4, Bi et al disclose in Figure 4 that a terminal is provided for transmitting a reservation request (access probe) for the first time when the first persistency probability (predetermined threshold P) predefined by the base station is larger than a random number generated in the respective terminal (Blocks 68-34). Bi et al also disclose that a terminal is provided for transmitting a reservation request (access probe) received at least once by the base station when the further persistency probability (another predetermined threshold P) predefined by the base station is larger than a random number generated in the respective terminal (Blocks 68-34). Refer to Column 4, lines 8-30. The P value can be "re-calculated at each pass through the persistence test" (Column 8, lines 8-9).

Referring to claim 5, Bi et al disclose that the base station is provided for determining the first and second persistency probability in dependence on the traffic load, so that with a small traffic load the first and second persistency probability are higher than with a higher traffic load. "In overload situations, P will decrease because the base station will include the persistency values psis(n) for the ordinary overload classes, thereby making the persistence test even more difficult to pass" (Column 4, lines 50-54).

Referring to claim 6, Bi et al disclose in Figure 4 that the base station is provided for transmitting the further persistency probability (another predetermined threshold P) only after the transmission on a complete data packet has been rejected (Block 68). If the generated random number RP is greater than P, the data packet is rejected and the access probe waits until at least the next time slot to perform the persistence test again.

Refer to Column 4, lines 17-21. Furthermore, P values are "re-calculated at each pass through the persistence test to ensure that updated persistence parameters are used to calculate the P values" (Column 8, lines 7-9).

Referring to claim 7, Bi et al disclose in Figure 4 that the base station is provided for transmitting a second persistency probability (predetermined threshold P) only when previously a rejection message has been sent. When a terminal attempts to send an access probe and does not receive an acknowledgement from the base station for the request (when RP > P), the terminal performs another persistence test (Block 68). Refer to Column 2, lines 54-64 and Column 4, lines 14-21. Furthermore, P values are "re-calculated at each pass through the persistence test to ensure that updated persistence parameters are used to calculate the P values" (Column 8, lines 7-9).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,374,099 to Bi et al in view of U.S. Patent No. 6,621,807 to Jung et al.

Referring to claim 2, Bi et al discloses that the data packet comprises a preamble and a data part. Refer to Column 3, lines 9-11. Bi et al does not disclose that the preamble is a reservation request from a terminal. Jung et al discloses in Figure 3A that a data packet consists of a preamble (Element 36) and a data part (Element 38). The

preamble is a channel designation request flag for the terminal to request designation of a channel on which a message will be sent. Refer to Column 4, lines 1-9. If a message is too long, it is separated into segments. The first segment is transmitted on the common access channel and the rest of the segments are transmitted on an available channel designated by the base station. Refer to Column 3, lines 52-59. This prevents "collisions with other MSs which are simultaneously attempting to transmit on the access channel," (Column 3, lines 58-59). "In response to the channel designation request, the channel used for channel designation may be selected by the BS" (Column 4, lines 18-19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the preamble is a reservation request from a terminal; the motivation being that if a message is too long and is separated into segments, the terminal can request another channel besides the common access channel to transmit additional segments of the message in order to avoid collision with other terminals using the common access channel.

Referring to claim 3, Bi et al does not disclose that a terminal, after receiving an assignment message, is provided for transmitting the data part of the packet. Jung et al discloses in Figure 3A that a data packet consists of a preamble (Element 36) and a data part (Element 38). The preamble is a channel designation request flag for the terminal to request designation of a channel on which a message will be sent. Refer to Column 4, lines 1-9. If a message is too long, it is separated into segments. The first segment is transmitted on the common access channel and the rest of the segments are transmitted on an available channel designated by the base station. Refer to

Column 3, lines 52-59. This prevents "collisions with other MSs which are simultaneously attempting to transmit on the access channel," (Column 3, lines 58-59). Once the BS designates a channel, "the transmission of all subsequent message segments will occur on the designated channel" (Column 9, lines 7-9). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that a terminal, after receiving an assignment message, is provided for transmitting the data part of the packet; the motivation being that if a message is too long and is separated into segments, the terminal can request another channel besides the common access channel to transmit additional segments of the message in order to avoid collision with other terminals using the common access channel.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,374,099 to Bi et al in view of U.S. Patent No. 6,078,572 to Tanno et al. Bi et al does not disclose that the base station is provided for transmitting a factor only after the transmission of a complete data packet has been rejected and that the terminal is provided for forming the further persistency probability from the received factor and the first persistency probability. Tanno et al disclose in Figure 12 that when a packet of information is to be transmitted, mobile stations generate a random number RND and compare it with transmission probability P (Step S40). If RND >= P, the mobile station does not transmit the data packet (Step S60) and repeats the process (Step S40) until RND < P. In order to calculate P, the base station transmits a factor (traffic information R) to the mobile stations, and the mobile stations "obtains transmission probability P from the traffic information R by using the table (Figure 11)" (Column 18, lines 54-56).

Refer to Column 17, lines 15-38 and Column 18, lines 50-64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that base station is provided for transmitting a factor only after the transmission of a complete data packet has been rejected and that the terminal is provided for forming the further persistency probability from the received factor and the first persistency probability. Since the mobile station calculates the persistency probability, it is possible to change the transmission probability of each mobile station, to add priority for accessing each mobile station, and in the event that a new algorithm for deciding a transmission probability were developed, to apply the new algorithm to the mobile station only without changing the structure of the base station. Refer to Column 18, line 65 to Column 19, line 8.

Allowable Subject Matter

8. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (703) 305-8395. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Chau can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8395.

C. Ng
December 3, 2003

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600